

# Response to Hurricane Katrina by the US EPA Region 4 Science and Ecosystem Support Division (SESD)

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On August 29, 2005, Hurricane Katrina made landfall along the Gulf coast of the southeastern United States. The high winds and storm surge were the cause of unprecedented damage from eastern Louisiana to near Mobile, Alabama. Following the storm the US EPA Region 4, Science and Ecosystem Support Division (SESD) in cooperation with other state and federal agencies was tasked with five principal activities that would assist in the damage assessment and recovery of the environment and municipal water systems.

1. Following Hurricane Katrina, Mississippi had to dispose of tremendous amounts of debris. Much of the vegetative debris was burned. SESD was tasked with coordinating a large air monitoring effort. A network of monitoring sites was established and manned to sample for air toxics resulting from these burns. The air monitoring effort is on going and modified as necessary to meet the changing demands of the recovery effort.
2. Three field studies were conducted to assist in evaluating possible hurricane related issues. In general, all three were designed to be a "snapshot" of the study areas to serve as the basis for future targeted investigations if needed.

#### *Water Quality Study of Bays in Coastal Mississippi Study*

SESD and the Mississippi Department of Environmental Quality (MDEQ) conducted a water quality study in the rivers and bays along the Mississippi coast. The objective of this study was to provide sediment and water quality data in each major bay system along the Mississippi Sound.

#### *Soil and Sediment Sampling Gulf Coast of Mississippi Study*

SESD collected soil and sediment samples near facilities in Mississippi to determine if flooding from the storm surge released hazardous constituents and materials. The facilities being investigated were located in the storm surge impacted portions of Mississippi.

#### *NPL and Non-NPL Superfund Site Evaluations Southern and Coastal Alabama and Mississippi Study*

SESD collected sediment, surface water and groundwater samples in the vicinity of National Priorities List (NPL) and non-NPL Superfund sites in the affected region to determine if storm-related releases occurred or, in the case of sites with operating remedial systems, make determinations as to the functionality of these systems.

3. SESD along with regional EPA personnel assisted the U.S. Army Corps of Engineers with preliminary damage assessments of water and wastewater facilities/collection systems along the Mississippi Gulf Coast. SESD provided technical assistance and contractor oversight of the temporary repairs made to the collection system infrastructure and wastewater treatment plants until permanent repairs could be made. SESD personnel also assessed damage to streets, curbs, sidewalks, and storm drains which was used to assist in planning and restoration.
4. A mobile laboratory staffed with SESD microbiologists was deployed to assist in analyzing drinking water samples from Mississippi. This effort helped to remove several communities from the Boil Water Advisories.
5. SESD provided a liaison person to MDEQ, who was stationed in a motor home, to assist in coordination and information exchange. The liaison also participated in regular meetings with MDEQ senior management to discuss Region 4 activities in the Gulf area in support of recovery operations.



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